To: sarah.gaichas@noaa.gov[]
Cc: []
Bcc: []
From: CN=Phil North/OU=R10/O=USEPA/C=US
Sent: Mon 1/4/2010 8:16:08 PM
Subject: Re: Fw: Bristol Bay salmon role in North Pacific

Hi Sarah,
Can you help me out? If you send a phone number I'll call and explain my effort. Anything you can offer would be helpful.

Thanks
Phil

Phillip North
Environmental Protection Agency
Kenai River Center
514 Funny River Road
Soldotna, Alaska 99669
(907) 714-2483
fax 260-5992
north.phil@epa.gov

"To protect your rivers, protect your mountains."

From: "Daniel Schindler" <deschind@u.washington.edu>
To: <sarah.gaichas@noaa.gov>
Cc: Phil North/R10/USEPA/US@EPA
Date: 12/31/2009 12:12 PM
Subject: Fw: Bristol Bay salmon role in North Pacific

Hi Sarah,
I intended for you to receive this message but mis-typed your email.
Daniel

----- Original Message -----
From: "Daniel Schindler" <deschind@u.washington.edu>
To: <wgpearcy@coas.oregonstate.edu>; <North.Phil@epamail.epa.gov>
Cc: "Kerim Aydin" <Kerim.Aydin@noaa.gov>; <sarah.gachias@noaa.gov>
Sent: Thursday, December 31, 2009 1:07 PM
Subject: Re: Bristol Bay salmon role in North Pacific

> Hi Phil,
>
> I suspect that at the scale of fish biomass in the North Pacific, or even
> Bering and Gulf of AK, that this number will end up being tiny. The person
> to get in touch with to put your estimate in perspective is Kerim Aydin at
> the Alaska Fisheries Science Center. His group has developed a bunch of

> Ecosim models for these ecosystems so they should be able to tell you who
> the main predators for salmon smolts are, and how much of their diets are
> smolts. Sarah Gachias also works with this group and certainly has the
> answer as well.
>
> Cheers and good luck - all data to show that the Pebble Mine is an
> environmental (and social) mistake are needed!
> Daniel
>
>
> ----- Original Message -----
> From: <North.Phil@epamail.epa.gov>
> To: <wgpearcy@coas.oregonstate.edu>; <deschind@u.washington.edu>
> Sent: Thursday, December 31, 2009 9:34 AM
> Subject: Fw: Bristol Bay salmon role in North Pacific
>
>
>>
>> Bill and Daniel,
>> As you can see in the message string below Bob Naiman gave me your
>> names. I am trying to describe the likely consequences of various
>> scenarios of impact should the Pebble Mine be developed in the Bristol
>> Bay watershed. As described below, based on ADFG data and assumptions I
>> have estimated that the Nushagak and Kvichak river systems produced
>> about 1.6 billion smolts from the 2008 salmon run. About 1.57 billion
>> of these fish will not return and so are forage for something in the
>> North Pacific and Bering Sea. But I have no sense of the significance
>> of that number of fish in the ocean ecosystem. I am trying to answer
>> the question "If there was a substantial loss from the out-migration of
>> Nushagak and Kvichak salmon what would be the effect on the North
>> Pacific and Bering Sea ecosystem(s)?"
>>
>> My background is in fresh water systems. Can you direct me to any
>> literature that might help answer the question or can you help me answer
>> this question?
>>
>> Phil
>>
>>
>>
>> Phillip North
>> Environmental Protection Agency
>> Kenai River Center
>> 514 Funny River Road
>> Soldotna, Alaska 99669
>> (907) 714-2483
>> fax 260-5992
>> north.phil@epa.gov
>>
>> "To protect your rivers, protect your mountains."
>> ----- Forwarded by Phil North/R10/USEPA/US on 12/31/2009 08:18 AM -----
>>
>> From: "Robert J. Naiman" <naiman@uw.edu>
>>
>> To: Phil North/R10/USEPA/US@EPA
>>

>> Date: 12/31/2009 06:20 AM
>>
>> Subject: Re: Bristol Bay salmon role in North Pacific
>>
>>
>>
>>
>>
>>
>> Phil,
>>
>> You might try contacting Bill Pearcy (Oregon State University;
>> <wgpearcy@coas.oregonstate.edu>) or Daniel Schindler (UW;
>> <deschind@u.washington.edu>). If they cannot help then I suspect that
>> they will know someone who can.
>>
>> I hope your project goes well as there is a lot riding on the
>> development of the mine.
>>
>> Cheers, Bob
>>
>>>>>>>>>>>>>>>>>>>>>>>>>>>>
>> Robert J. Naiman
>> Professor and UNESCO Chair in Sustainable Rivers
>> School of Aquatic and Fishery Sciences
>> University of Washington - 355020
>> Seattle, WA 98195-5020 USA
>> Phone (206) 685-2025
>> Fax: (206) 685-7471
>>
>> FOR DELIVERIES AND EXPRESS MAIL:
>> UW-Fishery Sciences Building
>> 1122 N.E. Boat Street
>> Seattle, WA 98105
>> <<<<<<<<<<<<<<<<<<<<<<<<<<<
>>
>> On Wed, 30 Dec 2009 North.Phil@epamail.epa.gov wrote:
>>
>>>
>>> Hello Dr. Naiman,
>>> One of my duties is the review of environmental impacts of the Pebble
>>> Mine in the Bristol Bay watershed. In my attempt to determine likely
>>> outcomes of mine development I have tried to project the consequences
>> of
>>> various levels of upset at the mine, in various time frames. In doing
>>> so I estimated the number of smolts produced by the Nushagak and
>> Kvichak
>>> Rivers. I am not aware of any monitoring of smolts so I employed
>>> assumptions and estimates used by ADFG to manage the fishery. I
>>> projected that, based on 2008 escapement estimates (28 million) and
>>> smolt survival assumptions (10%), these two watersheds produced 1.6
>>> billion smolts.
>>>
>>> This seems like a big number. But now I am trying to figure out what
>>> this number means to the North Pacific ecosystem (including the Bering
>>> Sea). I don't know how this number of fish relates to the overall

>>> population of "forage fish". In turn I don't know the consequences of
>> a
>>> reduction of this number of fish migrating to food webs in the North
>>> Pacific.
>>>
>>> Can you recommend anyone I might contact who has this expertise?
>>>
>>> Phil
>>>
>>> Phillip North
>>> Environmental Protection Agency
>>> Kenai River Center
>>> 514 Funny River Road
>>> Soldotna, Alaska 99669
>>> (907) 714-2483
>>> fax 260-5992
>>> north.phil@epa.gov
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